IN THE SPECIFICATION:

Amend the following paragraphs of the specification as follows:

Amend the paragraph spanning pages 1-2 as follows:

A diagnostic procedure which is greatly aided by contrast agents is the visualization and measurement of tissue perfusion such as the perfusion of the myocardium with oxygenated blood flow. Perfusion imaging and measurement of perfusion at a designated point in the body is described in US patent 5,833,613, for instance. The parent application serial number 10~~,~~/025,200, now US patent 6,692,438, describes a method and apparatus for making and displaying the results of perfusion measurements for a large region of tissue rather than just a particular sample volume location. Such a capability enables the rapid diagnosis of the perfusion rate of a significant region of tissue such as the myocardium, enabling the clinician to quickly identify small regions of tissue where perfusion is problematic due to ischemia or other bloodflow conditions.

Amend the paragraph spanning pages 8-9 as follows:

The area of interest in the image, in this example the myocardium, may optionally be delineated by assisted border detection as shown in FIGURES 7a-7d. FIGURE 7a illustrates a contrast image sequence 90 which may be a real time sequence 70 or a triggered sequence 80. From the image sequence 90 the user selects an image 92 which shows relatively well defined endocardial and epicardial borders. This image 92 is shown enlarged in FIGURE 7b. The selected image is then processed by assisted border detection, as described in U.S. patent 6,491,636, entitled "Automated Border Detection in Ultrasonic Diagnostic Images," the contents of which is hereby incorporated by reference. Automated or assisted border detection acts to delineate the myocardium with a border 94 as shown in FIGURES 7c and 8a. The border outline 94 on the selected image is then used to automatically delineate the border on other images in the sequence 90, as explained in the

'636 patent and shown in FIGURE 5d. Alternatively, the borders may be drawn on the other images in the sequence by processing them individually with the automated border detection algorithm. The area of interest where perfusion is to be represented parametrically is now clearly defined for subsequent processing. If desired, the area of interest may be further defined by a mask 96, as shown in FIGURE 8b, in which the area within the border trace is masked. All pixels under the mask are to be processed in this example, while pixels outside of the mask are not processed parametrically. An assisted border detection technique is described in concurrently filed patent application serial number 10/984,320~~[attorney docket ATL-349]~~, entitled "ULTRASONIC DIAGNOSTIC IMAGING SYSTEM WITH ASSISTED BORDER TRACING," the contents of which are herein incorporated by reference.

Amend the paragraph spanning pages 12-13 as follows:

The portion of an ultrasound system which enables this opacity control is shown in FIGURE 16. Echo signals are received by a harmonic signal detector 138 which separates and detects harmonic signal components from echo signals returned by tissue and/or contrast agent in the blood flow. Harmonic signal separation can be performed by bandpass filtering or by pulse inversion as described in US patents 5,706,819 (Hwang), 5,951,478 (Hwang et al.), and 6,193,662 (Hwang). The harmonic signals are detected by amplitude detection or Doppler processing (see US patent 6,095,980) and stored in an image data memory 140. The image data used for an image is forwarded to a scan converter 142 which produces image data of the desired image format, *e.g.*, sector, rectangular, virtual apex, or curved linear. The scan converted image data is stored in the image data memory from which it is accessed by an assisted border detector 144 and a perfusion parameter processor 156. The assisted border detector 144 is responsive to input from a trackball pointing device on a user control panel 150 to locate control points with reference to the image data and position and stretch boundary templates with respect to the image data, as discussed more fully in the concurrently filed patent application serial number

10/984,320~~[attorney docket ATL-349]~~. The template data is provided by a border template storage device 146. As the control points and borders are being drawn and positioned on the image, the control point and border data produced by the assisted border detector 144 is applied to a graphics processor 148, which produces a graphic overlay of the control points and border to be displayed with the image data. The delineated border is also provided to the perfusion parameter processor 156, which computes and color maps perfusion parameters over the area or volume delineated by the border, as explained above in conjunction with FIGURES 8-13. The perfusion color values for the region of interest are also coupled to the graphics processor 148 which combines the perfusion parameters with the border to form the parametric image as shown in FIGURES 15b-15e, and also adds the graphic of the slider 160. The image data corresponding to (and therefore in anatomical registration with) the parametric image is coupled to an image data processor 154. Signals from the pointing device on the user control panel used to move the slider 160 are coupled to both the image data processor 154 and the graphics processor 148, where the signals are used to appropriately adjust the relative opacities of the structural image of the image data processor and the parametric image of the graphics processor. The graphic overlay of the slider and parametric image and the structural image data are stored in a display memory 152, from which they are accessed for display by the video processor 50.